



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

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*Workshop on the Implementation
of the Amendment 82 to Annex 3
to Chicago Convention and the
PANS-MET*

(Praia, Cabo Verde, 30 March – 23 April 2026)



Session 2 : Main changes introduced by Amendment 82 to Annex 3

PPT2.1. Major changes related to Amendment 82 of the Annex3

ICAO, WACAF Office

Overview

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Introduction

- Annex 3 to the CC, 21st Ed and the new edition of the PANS-MET are available on ICAO-NET (English and French version).
- The Council, 2 April 2025: Adoption of Amendment 82 and the new NEP-TEPs (Doc 10157), with date of applicability as of 27 November 2025, with applicability of QVA for all VAACs as of 25 November 2026.
- These amendments introduced major changes in the standards and procedures for the provision of meteorological information to users in line with the Global Air Navigation Plan.

Amendments to Annex 3

Amendments schedule

Origine	N° Amendment	Expected initial applicability	New applicability expected
IMP2	Amd. 81	Nov. 2024	Nov. 2024
METP5	Amd. 82	Nov. 2024	Nov. 2025
METP6	Amd. 83	Nov. 26	Nv. 2027
METP7	Amd. 84	Nov. 2029	Nov. 2030

Major changes of the AMD 82 to Annex 3

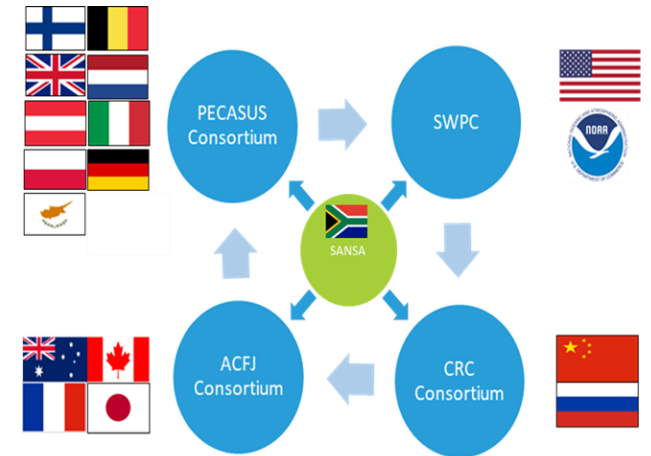
1. Restructuring of the A3 & Introduction of a new PANS-MET – A NEW STRUCTURE

- **Principles for restructuring Annex 3 and developing new PANS-MET**
 - ◇ Maintain a higher level of requirements in the annex and technical specifications in the **PANS-MET**
 - ◇ Relocate the descriptive provisions and technical specifications of Annex 3 to the new **PANS-MET**
- **PANS-MET, as a means of a compliance document:**
 - ◇ Allows the transition of the MET service from a "product-centric" to a "data-centric" service under the SWIM
 - ◇ Improve States' responsiveness of national regulations to evolving technical requirements under the PANS-MET.
- **Benefits of this restructuring;**
 - ◇ The new PANS-MET **will only provide technical specifications to ensure compliance with the higher-level requirements** of Annex 3, helping States to optimize their implementation plan.
 - ◇ The adjustment of national regulations **could be solved more easily** at a lower level, compared to the current "all-in-one" Annex 3».

Major changes of the AMD 82 to Annex 3

2. Space Weather Information Services(SWIS)

- Introduced in the A3 since the AMD 78 (November 2018)
- Designated SWXCs provide space weather services on a global scale.
 - ◇ **4 Global SWXC** (ACFJ, PECASUS, US et CRC)
 - ◇ **1Regional SWXC** (SANSA)
- Operational services began in November 2019.
- Targeted impacts on aviation by space weather events (solar storms, geomagnetic storms, ionospheric disturbances):
 - ◇ **HF Communications(HF COM).**
 - ◇ **GNSS-based navigation and monitoring(GNSS).**
 - ◇ **Radiation Impacts on Avionics, Passengers and Crew on Board (RAD).**

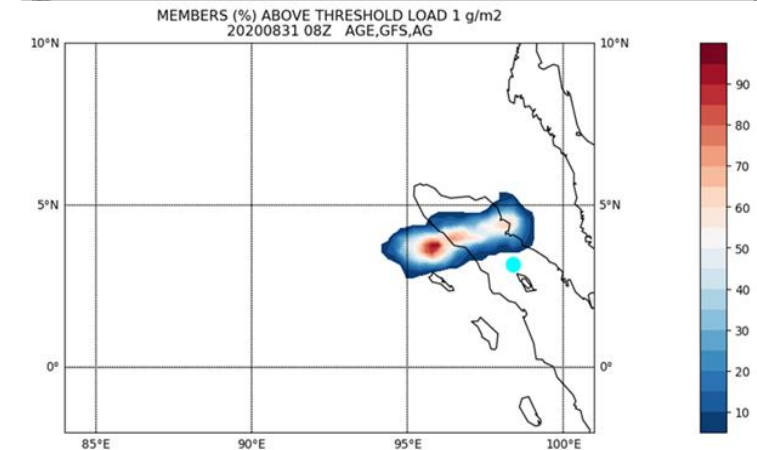
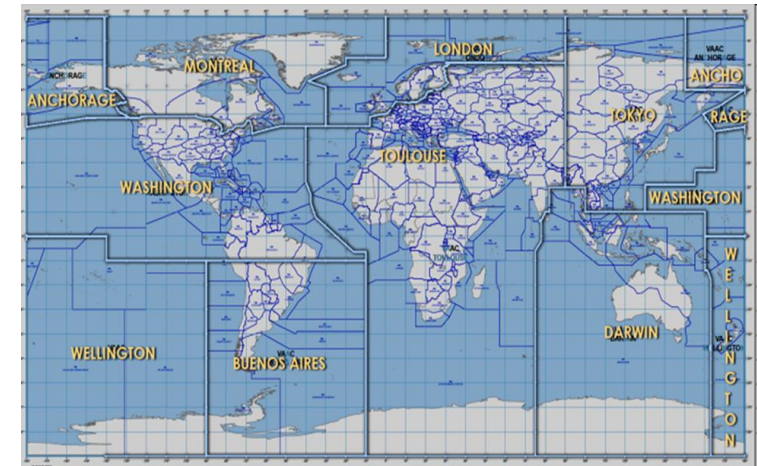


Details are described in the ICAO Manual on Space Weather Information in Support of International Air Navigation (Doc 10100).

Major changes of the AMD 82 to Annex 3

3. Quantitative information on the concentration of volcanic ash(QVA)

- **Nine (9) Volcanic Ash Advisory Centers (VAACs) provide VA services:**
 - ◇ 24-hour monitoring/forecasting of the presence and extent of volcanic ash in the atmosphere.
 - ◇ Volcanic ash advisories (VAAs) are issued.
 - ◇ In coordination with the State Volcanological Observatories (SVO).
- **User requirements for future development:**
 - ◇ Rapid detection of eruptions or ash clouds.
 - ◇ 4D characteristics (x, y, z, t) of VA clouds.
 - ◇ Quantitative information on the concentration of volcanic ash clouds (quantitative) / Uncertainty information.
- **QVA's Initial Operational Capability: Started in November 2025 through the AMD 82e to A3 to CC.**



Major changes of the AMD 82 to Annex 3

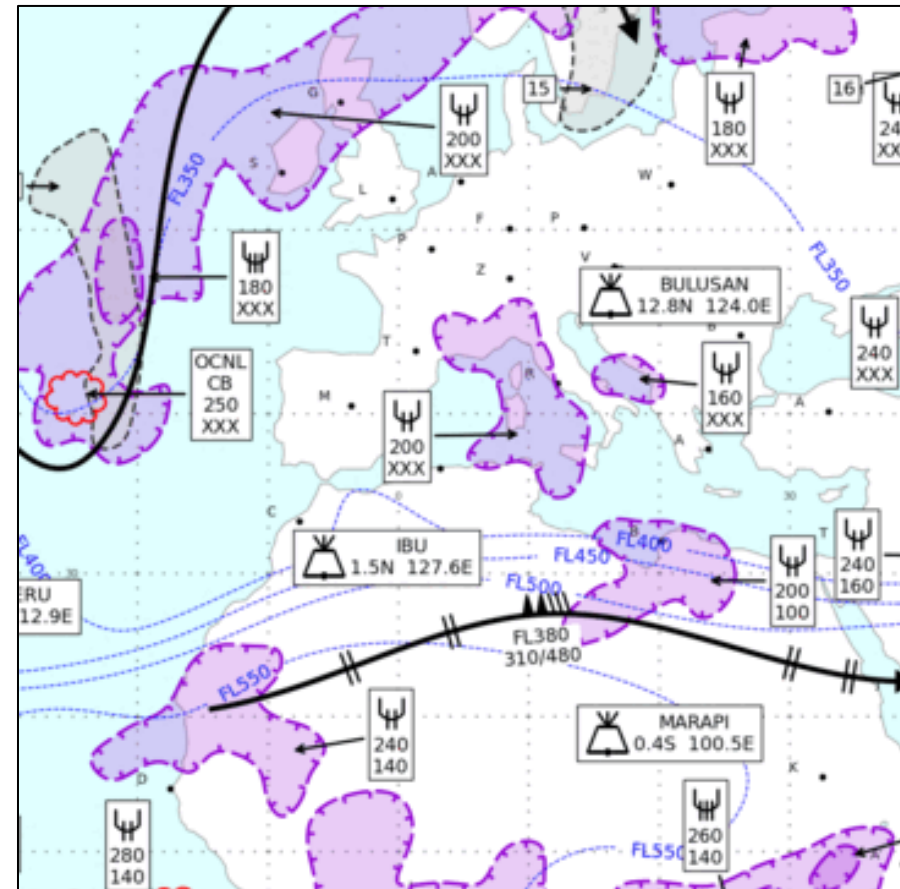
4. Digitization of meteorological information

- **Implementation of the model for the exchange of meteorological information in digital format (IWXXM model).**
 - ◇ Requirement to implement the IWXXM in November 2020.
 - ◇ Regional workshops/webinars were organized.
 - ◇ Transition from the provision of "product-centric" MET services to "information services" compatible with the SWIM environment.
- **Implementation of MET information services via SWIM:**
 - ◇ Removed limitations related to TAC formats.
 - ◇ Enable an exchange of MET information in IWXXM format.
 - ◇ Enable integrated use in decision-making/visualization systems suitable for use in end-user systems.
- The 81st AMD in ICAO Annex 3 (November 2024) recommends the establishment of SWIM-enabled information services for the provision of MET information.

Major changes of the AMD 82 to Annex 3

4. Further development of WAFS

- Upgrading of WAFS forecasts to better reflect the provisions of the Global Air Navigation Plan (GANP).
- WAFCs transmit upper data with increased spatial and temporal resolution for long forecast timelines (up to 36 hours).
- Significant weather forecasts (SIGWX) in IWXXM format.



Major changes of the AMD 82 to Annex 3

5. Clarification of the definition of meteorological authority

- Clarification of institutional roles, with the redefinition of the meteorological authority and the introduction of a formal definition of the meteorological service provider.
- **Meteorological Authority:**
 - ◇ **Meteorological Administration** : Entity arranging for the provision of meteorological service for international air navigation on behalf of a Contracting State and providing regulation and oversight of the meteorological service.
 - ◇ is responsible for:
 - a) **High-level internal coordination** in aviation meteorology;
 - b) **International coordination** with meteorological authorities in other States.



Major changes of the AMD 82 to Annex 3

6. Introduction of the VONA notice format

- Introduction of the Volcano Observatory Notice for Aviation (VONA) as a recommended practice, to strengthen operational communication in the event of a volcanic eruption.
- **Annex 3, 21st Edition**
 - ◇ **STD 7.1.1** The advisory information on volcanic ash shall be issued by a volcanic ash advisory centre.
 - ◇ 7.1.2 Recommendation.— *Information on volcanic activity and/or volcanic ash in the atmosphere should be issued by a State volcano observatory as a Volcano Observatory Notice for Aviation (VONA).*



Major changes of the AMD 82 to Annex 3

6. Introduction of the VONA notice format *(Continued)*

PANS-MET, Doc 10157 :

- **6.1.4** State volcano observatories should issue information on volcanic activity and/or volcanic ash in the atmosphere as the volcano observatory notice for aviation (VONA).
- **6.1.5** VONA **shall be** in abbreviated plain language, using approved ICAO abbreviations and numerical values of self-explanatory nature, and shall be in accordance with the template shown in **Appendix 7, Table A7-1**. When no approved ICAO abbreviations are available, English plain language text, kept to a minimum, shall be used to describe elements for which the template allows the use of free text.
- **6.1.6** VONA **should be disseminated in IWXXM form** in addition to its dissemination of the notice in abbreviated plain language in accordance with 6.1.5.



- Amendment 82 to Annex 3 to the CC consisted of the restructuring of Annex 3 to retain only **the high-level requirements (SARPs)** for the provision of meteorological services for international air navigation.
- **Appendices, supplements and other technical specifications of Annex 3** have been transferred into the new Procedures for Air Navigation – Meteorological (PANS-MET, Doc 10157).
- Restructured Annex 3 contains **provisions that are more stable over time** and change little compared to those of the PANS-MET.
- PANS-MET stand as **means of implementation/compliance** of/with SARPs; are more **flexible and evolve faster** than SARPs.



Thank You!